AMENDMENTS TO THE CLAIMS

1 to 41. (Canceled).

42. (New) A method for inhibiting polymerization of an amyloid β peptide in a patient in need thereof, comprising administering to said patient a therapeutic effective amount of a compound defined by the Formula:

$$\mathbf{R_1\text{-}AA\text{-}R_2}$$

wherein AA in said Formula corresponds to an amino acid sequence selected from the group consisting of:

His-Gln-Lys-Leu-Val-Phe;

His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu;

His-His-Gln-Lys-Leu-Val-Phe;

Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala;

Val-His-His-Gln-Lys-Leu-Val-Phe;

Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val-Phe; and

Gly-Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val;

and wherein

R_1 is H or $-CO-R_3$ bonded at the α-amino group of the N-terminal of AA;

R_2 is H or $-OR_4$ or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of AA;

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are $-(CH_2)_n-$, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

said amino acids can be either D- or L-isomers.

43. (New) A method for inhibiting polymerization of an amyloid β peptide, comprising contacting an amyloid β peptide-containing environment with a polymerization inhibiting effective amount of a compound defined by the Formula:

R_1-AA-R_2

wherein AA in said Formula corresponds to an amino acid sequence selected from the group consisting of:

His-Gln-Lys-Leu-Val-Phe;

His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu;

His-His-Gln-Lys-Leu-Val-Phe;

Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala;

Val-His-His-Gln-Lys-Leu-Val-Phe;

Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val-Phe; and

Gly-Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val;

and wherein

R_1 is H or $-CO-R_3$ bonded at the α-amino group of the N-terminal of AA;

R_2 is H or $-OR_4$ or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal

of AA;

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are $-(CH_2)_n-$, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

said amino acids can be either D- or L-isomers.

44. (New) The method of claim 42, wherein all the amino acids of the compound are D-isomers.

45. (New) The method of claim 43, wherein all the amino acids of the compound are D-isomers.

46. (New) The method of claim 42, wherein R_1 is acetyl.

47. (New) The method of claim 43, wherein R_1 is acetyl.

48. (New) The method of claim 42, wherein R_1 is H or R_2 is H.

49. (New) The method of claim 43, wherein R_1 is H or R_2 is H.

50. (New) The method of claim 42, wherein the patient has Alzheimer's disease or another disease characterized by amyloidosis.